

REMARKS

This is a full and timely response to the Final Office Action dated August 13, 2002. Reexamination and reconsideration in light of the above amendments and the following remarks are courteously requested.

Claims 1-41 are pending in this application, with claims 1 and 19 being independent. Claims 19-34 were withdrawn from consideration by the Examiner as being drawn to an invention that has been non-elected with traverse.

No new matter is added.

This amendment *prima facie* places the case in condition for allowance. Alternatively, it places this case in better condition for appeal. Accordingly, entry of this amendment is respectfully requested.

Applicant, seeking review of the prematureness of the final rejection within the Final Office action, respectfully requests reconsideration of the finality of the Office action for the reasons set forth hereinbelow. See M.P.E.P §706.07(c).

Rejection Under 35 U.S.C. 112

Claims 12 was rejected under 35 U.S.C. 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

This rejection is traversed at least for the following reasons.

While not conceding the propriety of this rejection, and in order to further the prosecution of the application, claim 12 has been amended, rendering the rejection moot as to this claim.

Withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. 103

Claims 1-4, 6-17, 35, 38-41 were rejected under 35 U.S.C. 103 as allegedly being obvious over U.S. Patent 5,972,459 issued to Kawakubo et al. (Kawakubo) in view of U.S. Patent No. 5,635,267 issued to Yamada et al. (Yamada).

Claims 5 and 18 were rejected under 35 U.S.C. 103 as allegedly being obvious over Kawakubo in view of Yamada et al.

and in further view of U.S. Patent No. 5,614,287 issued to Sekiya et al. (Sekiya).

These rejections are respectfully traversed for at least the above reasons and the following reasons.

Kawakubo arguably discloses a light transmission flattenable film 205. Yamada arguably discloses a light transmission flattenable film 8 (figures 1A-D) or a light transmission flattenable film 9 (figure 2), and Sekiya arguably discloses a light transmission flattenable film 19.

But within the claims as amended, the light transmission flattenable film includes a backing layer, a light transmission flattenable layer and a surface layer. The backing layer is above the formed film layer, the light transmission flattenable layer is above the backing layer, and the said surface layer is above said light transmission flattenable layer.

The Final Office Action admits that the cited prior fails to teach the order the layers are arranged in. Yet, the Office Action asserts, without providing any supporting evidence, that it has been held that rearranging parts of an invention involves

only routine skill in the art.

In response to this assertion, it has been held that "the mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims . . . is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of the [applicant's] specification, to make the necessary changes in the reference device" (emphasis added). *Ex parte Chicago Rawhide Mfg. Co.*, 223 USPQ 351, 353 (Bd. Pat. App. & Int. 1984) (Examiner's rejection based on a rearrangement of parts lacked evidence showing motivation, and thus, the rejection was not sustained). See also M.P.E.P 2144.04.

Instead, *prima facie* obviousness of a claimed invention is established "only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Furthermore, the teachings, suggestions or incentives supporting the combination "must be clear and particular." *In re Dembiczak*, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999).

In this regard, the Office Action impermissibly benefits from of the specification to make the necessary changes in Huang. "It is impermissible, however, simply to engage in a hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill the gaps. The references themselves must provide some teaching whereby the applicant's combination would have been obvious" (citations omitted). *In re Gorman*, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). See also *In re Dembiczak*, 50 USPQ2d 1614, 1616 (Fed. Cir. 1999) (rejection based upon hindsight is reversed).

In addition, this assertion amounts to nothing more than an "obvious-to-try" situation. Specifically, "an 'obvious-to-try' situation exists when a general disclosure may pique the scientist's curiosity, such that further investigation might be done as a result of the disclosure, but the disclosure itself does not contain a sufficient teaching of how to obtain the desired result, or that the claimed result would be obtained if certain directions were pursued." *In re Eli Lilly & Co.*, 14 USPQ2d 1741, 1743 (Fed. Cir. 1990). Moreover, "an invention is 'obvious to try' where the prior art gives either no indication of which parameters are critical or no direction as to which of

many possible choices is likely to be successful." *Merck & Co. Inc. v. Biocraft Laboratories Inc.*, 10 USPQ2d 1843, 1845 (Fed. Cir. 1989).

Here, cited prior art does not contain a sufficient teaching of how to obtain the desired result, or that the claimed result would be obtained if certain directions were pursued. "Obvious to try" is not the standard under §103. *In re O'Farrell*, 7 USPQ2d 1673, 1680 (Fed. Cir. 1988).

Withdrawal of these rejections and allowance of the claims is respectfully requested.

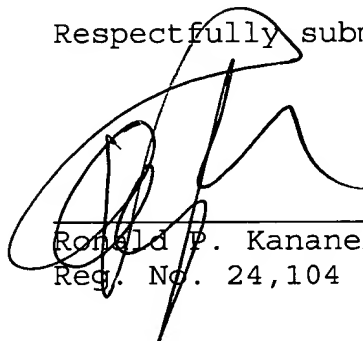
Conclusion

For the foregoing reasons, all the claims now pending in the present application are allowable, and the present application is in condition for allowance. Accordingly, favorable reexamination and reconsideration of the application in light of the amendments and remarks is courteously solicited.

If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is

requested to telephone Brian K. Dutton, Reg. No. 47,255, at 202-955-8753 or the undersigned attorney at the below-listed number.

Respectfully submitted,



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APPENDIX

IN THE CLAIMS

Please amend the claims as follows.

1. An optical recording medium for performing at least one of recording and reproduction of information by irradiation of light, comprising;

on a substrate with fine concavities and convexities formed on a surface thereof on a side onto which said irradiation of light is performed a formed film layer the surface of which is made a surface of fine concavities and convexities representing said fine concavities and convexities and which has at least a recording layer; and

a light transmission flattenable film which buries therein the fine concavities and convexities surface, and which has a transmission characteristic with respect to the irradiated light, and which has its surface polished and has a hardness enabling it to be polished,

wherein said light transmission flattenable film includes a backing layer, a light transmission flattenable layer and a surface layer, said backing layer being above said formed film layer, said light transmission flattenable layer being above said

backing layer, and said surface layer being above said light transmission flattenable layer.

2. The optical recording medium according to claim 1, wherein the formed film layer has a reflection film formed on the substrate.

3. The optical recording medium according to claim 1, wherein the light transmission flattenable film consists of inorganic flattenable material.

4. The optical recording medium according to claim 1, wherein the light transmission flattenable film consists of flattenable material the formation temperature of which is 150 C or less.

5. The optical recording medium according to claim 1, wherein the substrate consists of organic material substrate; and the light transmission flattenable film consists of film-forming material the formation temperature of which is 150°C or less.

6. The optical recording medium according to claim 1, wherein the light transmission flattenable film consists of spin-coat flattenable material.

7. The optical recording medium according to claim 1, wherein at least one of respective films constituting the formed film layer consists of a sputtering-formed film.

8. The optical recording medium according to claim 1, wherein the thickness of the light transmission flattenable film is made to be 400 nm or less.

9. The optical recording medium according to claim 1, wherein the thickness of the light transmission flattenable film is made to be equal to or smaller than the thickness of the formed film layer.

10. The optical recording medium according to claim 1, wherein the thickness of the light transmission flattenable film is made 100 nm or less.

11. The optical recording medium according to claim 1, wherein the light transmission flattenable film consists of spin-coat flattenable material having SiO_2 as a main component.

12. (amended) The optical recording medium according to claim 1, wherein the light transmission flattenable film has a ~~high~~-level of flatness by having protrusions eliminated that damage an optical system disposed in the proximity of and in opposition to the surface of the light recording medium and performs the irradiation of light.

13. The optical recording medium according to claim 1, wherein the fine concavities and convexities have lands and grooves;

the difference in level between the land and the groove is selected to be at a value which only causes mutual interaction between these two to less occur with respect to the irradiated light; and

the recording of the information is performed with respect to the recording layer of either, or both, of the land and the groove.

14. The optical recording medium according to claim 1, wherein a backing layer of dielectric material is formed on a surface where the light transmission flattenable film is formed.

15. The optical recording medium according to claim 1, wherein a backing layer of dielectric material is formed on a surface where the light transmission flattenable film is formed, whereby the irradiation efficiency of a irradiated light with respect to the recording layer is enhanced.

16. The optical recording medium according to claim 1, wherein a backing layer of dielectric material is formed on a surface where the light transmission flattenable film is formed, whereby the surface hardness of the optical recording medium is enhanced.

17. The optical recording medium according to claim 1, wherein the recording layer has a material layer the phase of which is changed by the irradiation of light from an amorphous state of low reflectance to a crystalline state of high reflectance or vice versa.

18. An optical recording medium according to claim 1, wherein the recording layer has a material layer the state of magnetization of which is changed by the irradiation of light.

19. A manufacturing method of an optical recording medium for performing at least one of recording and reproduction of information by irradiation of light, comprising:

a manufacturing step of manufacturing a substrate having fine concavities and convexities formed on the surface thereof on a side onto which the irradiation of light is performed;

a forming step of forming a formed film layer the surface of which is made a fine concavities and convexities surface reflecting the fine concavities and convexities on itself and which has at least a recording layer;

a forming step of forming a light transmission flattenable film which has buried in the formed film layer the fine concavities and convexities surface, and which has a transmission characteristic with respect to the irradiated light, has its surface polished and has a hardness enabling it to be polished; and

a polishing step of polishing at least the surface of the light transmission flattenable film.

20. The manufacturing method of an optical recording medium according to claim 19, wherein before executing the forming step of forming the light transmission flattenable film there is executed a step of eliminating or truncating protrusions on the surface of the substrate.

21. The manufacturing method of an optical recording medium according to claim 19, wherein the polishing step is a flying tape polish (FTP) step.

22. The manufacturing method of an optical recording medium according to claim 19, wherein in the forming step of the formed film layer there is executed a step of forming a reflection film on the substrate.

23. The manufacturing method of an optical recording medium according to claim 19, wherein the forming step of the formed film layer uses a method of forming a film by sputtering.

24. The manufacturing method of an optical recording medium according to claim 19, wherein the formation of the light transmission flattenable film is performed at a temperature of 150°C or less.

25. The manufacturing method of an optical recording medium according to claim 19, wherein the substrate is formed using an organic substrate material; and

the formation of the light transmission flattenable film is performed at a temperature of 150°C or less.

26. The manufacturing method of an optical recording medium according to claim 19, wherein the formation of the light transmission flattenable film is performed using a spin-coating method of inorganic material.

27. The manufacturing method of an optical recording medium according to claim 19, wherein the formation of the light transmission flattenable film is performed to a thickness of 400 nm or less.

28. The manufacturing method of an optical recording medium according to claim 19, wherein the formation of the light transmission flattenable film is performed to a thickness equal to or smaller than the thickness of the formed film layer.

29. The manufacturing method of an optical recording medium according to claim 19, wherein the light transmission flattenable film is formed using a spin-coating method of performing spin-coating with respect to a flattenable material having SiO₂ as a main component.

30. The manufacturing method of an optical recording medium according to claim 19, wherein the fine concavities and convexities have lands and grooves;

the difference in level between the land and the groove is selected to be at a value which only causes mutual interaction between these two to less occur with respect to the irradiated light; and

the recording layer of either, or both, of the land and the groove is used as a recording portion of the information.

31. The manufacturing method of an optical recording medium according to claim 19, wherein after executing the forming step of the formed film layer having at least the recording layer there is executed the forming step of the light transmission flattenable film via a step of forming a dielectric backing layer on the surface of the formed film layer.

32. The manufacturing method of an optical recording medium according to claim 19, wherein after executing the forming step of the formed film layer having at least the recording layer there is executed the forming step of the light transmission flattenable film via a step of forming a dielectric backing layer on the surface of the formed film layer; and

the dielectric backing layer is formed using a material layer to enhance the surface hardness of the optical recording medium.

33. The manufacturing method of an optical recording medium according to claim 19, wherein the recording layer is formed using a material layer the phase of which is changed by the irradiation of light from an amorphous state of low reflectance to a crystalline state of high reflectance or vice versa.

34. The manufacturing method of an optical recording medium according to claim 19, wherein the recording layer is formed using a material layer the state of magnetization of which is changed by the irradiation of light.

35. The optical recording medium according to claim 1, wherein said light transmission flattenable film is capable of being polished.

36. The optical recording medium according to claim 1, wherein said backing layer is a first dielectric, said light transmission flattenable layer is a second dielectric, and said surface layer is a third dielectric.

37. The optical recording medium according to claim 36, wherein said first dielectric, said second dielectric and said third dielectric are the same dielectric.

38. The optical recording medium according to claim 1, wherein said light transmission flattenable film is on said formed film layer.

39. The optical recording medium according to claim 38, wherein said backing layer is on said formed film layer, said light transmission flattenable layer is formed on said backing layer, and said surface layer is on said light transmission flattenable layer.

40. The optical recording medium according to claim 1, wherein said formed film layer includes a reflection film, a first dielectric film and a phase change recording layer.

41. The optical recording medium according to claim 40, wherein said reflection film is formed on said substrate, said first dielectric film is formed on said reflection film, and said phase change recording layer is formed on said first dielectric film.